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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,921	11/21/2003	Wade Martin Poteet	86581-0003	7563
24633	7590	05/17/2007	EXAMINER	
HOGAN & HARTSON LLP IP GROUP, COLUMBIA SQUARE 555 THIRTEENTH STREET, N.W. WASHINGTON, DC 20004				WEBB, CHRISTOPHER G
ART UNIT		PAPER NUMBER		
		2884		
MAIL DATE		DELIVERY MODE		
		05/17/2007		
		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/717,921	POTEET ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Christopher G. Webb	2884	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 11 January 2007.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,4-28 and 31-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 28,31-35 and 38 is/are allowed.
- 6) Claim(s) 1,4-6,8-19,21,22,24-27,36,37,39-42 and 44 is/are rejected.
- 7) Claim(s) 7,20 and 23 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_.

**DETAILED ACTION**

***Response to Arguments***

Applicant's arguments, see remarks pages 11-14, filed 1/11/2007, with respect to claim 28 and 35 have been fully considered and are persuasive. The rejection of claims 28 and 35 has been withdrawn.

The indicated allowability of claim 13, 16, 18-20, 22, and 36 is withdrawn in view of the newly discovered reference(s) to Kaufman et al. (US 2002/0197728, hereafter Kaufman) and Gillispie (US 2002/0158211 A1, hereafter Gillispie). Rejections based on the newly cited reference(s) follow.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4, 6, 8-9, 11, 15-18, 21-22, 24-27, 36-37, 39-41, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cole et al. (US 2003/0160231 A1, hereafter Cole) in view of Hodgkinson (GB 2,365,966 A, hereafter Hodgkinson) and Kaufman.

With respect to claim 1, Cole discloses an UV fluorescence detector comprising: an excitation light source (fig. 5, element 510); a sample platform (fig. 5, element 520); an UV detector (fig. 5, element 114); and an analysis module for matching the induced fluorescence to a predetermined signature spectrum (paragraph [0037], lines 14-16). Cole does not teach the use of optics for directing the first excitation light to the platform or the use of a camera platform. Hodgkinson teaches an UV fluorescence apparatus with optics for directing the excitation light to the sample-receiving platform (fig. 2, element A). Kaufman teaches the use of a camera in a method and system for fluorescence detection (fig. 2, element 234). It would have been obvious at the time of invention to one of ordinary skill in the art to use the optics of Hodgkinson in the apparatus of Cole and a camera platform to facilitate the use of a camera as taught by Kaufman. Using optics to direct the light would allow a more precise delivery of the excitation light to the sample and permit varied configurations of the device. The use of a camera platform would allow positioning of the camera device relative to the sample.

As to claim 4, Cole does not teach the use of one of an optical lens, a shutter, a filter, a mirror, a fiber optic coupler, and an optical fiber. Hodgkinson teaches the use of an optical fiber (fig. 2, elements A and B). It would have been obvious at the time of invention to one of ordinary skill in the art to use the fibers of Hodgkinson as noted above with respect to claim 1.

As to claim 6, Cole discloses an input optic for passing the induced fluorescence to the UV detector (fig. 5, element 112).

As to claim 8, Cole discloses a second optic for receiving the induced fluorescence (fig. 5, element 112).

As to claim 9, Cole discloses that the second optic includes a filter (paragraph [0037], line 10).

As to claim 11, Cole discloses that the apparatus may include a spectrograph (paragraph [0036]).

As to claim 15, Cole discloses that the detector comprises a signal processor in the form of a tunable band pass filter (paragraph [0027], lines 15-17).

As to claim 16, Cole does not teach that the detector comprises a power source for providing power to the excitation source, sample platform, UV detector, and analysis module. It would have been obvious at the time of invention to one of ordinary skill in the art to employ a power source to these components. This would allow the use of active power devices.

As to claim 17, Cole discloses that the excitation light source includes at least an UV LED (paragraph [0037], lines 6-7).

As to claim 18, Cole does not teach that the laser source is between .1 and 250 millijoules. It would have been obvious at the time of invention to one of ordinary skill in the art to use a laser source between .1 and 250 millijoules. This would allow for a proper amount of energy to be imparted to the sample under observation.

As to claim 21, Cole discloses that the detector detects signals within about 240 nm to about 540 nm (paragraph [0029]).

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As to claim 22, Cole in view of Hogkinson and Kaufman does not teach the use of a light minimizing enclosure. However, it would have been obvious at the time of invention to one of ordinary skill in the art to use a light minimizing enclosure. A housing or other enclosure would separate the system from any ambient interference.

As to claims 24-25, Cole does not teach that the detector comprises a handheld scanner connected to the detector via fiber optic cables. The apparatus taught by Hodgkinson teaches a hand-held scanner connected to a UV detector via fiber optic materials (page 6, lines 1-6). It would have been obvious at the time of invention to one of ordinary skill in the art to use a handheld scanner connected to the detector by fiber optic materials. This would allow the apparatus to be field-portable.

As to claims 26-27, Cole does not teach that the detector can detect UV emissions from a chemical compound. Hodgkinson teaches a detector that can detect UV emissions from a chemical compound (page 3, lines 18-20). It would have been obvious at the time of invention to one of ordinary skill in the art to use the detector of Cole to detect UV emissions from a chemical compound as taught by Hodgkinson. This would allow detection of chemical contaminants on-site as opposed to in a laboratory setting (Hodgkinson, page 3, lines 10-12).

Claim 36 discloses the limitations of claims 1 and 16 and is rejected accordingly.

Claim 37 discloses the limitations of claims 1 and 19 and is rejected accordingly.

Claim 39 recites the limitations of claims 1 and 24. Claim 39 is rejected accordingly.

As to claims 40-41 and 44 disclose the limitations of claims 1, 16, 18, and 22 and is rejected accordingly.

Claims 5, 10, and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cole in view of Hodgkinson and Kaufman as applied to claims 4 and 9 above, and further in view of Adachi (US 2002/0022766 A1, hereafter Adachi).

With respect to claims 5 and 10, Cole in view of Hodgkinson does not teach the use of a filter wheel. Adachi teaches an endoscope that employs UV fluorescence and makes use of filter wheels (fig. 1, elements 23 and 25). It would have been obvious at the time of invention to one of ordinary skill in the art to use the filter wheels as taught by Adachi in the apparatus of Cole in view of Hodgkinson. The use of a filter wheel allows for a fine-tuning of the excitation light or the light from the induced fluorescence.

As to claims 12-13, Cole in view of Hodgkinson does not teach the use of a CCD detector. Adachi teaches a CCD detector (fig. 1, element 15). It would have been obvious at the time of invention to one of ordinary skill in the art to use a CCD detector as taught by Adachi in the apparatus of Cole in view of Hodgkinson. The use of CCDs is well known in the art, as they are noted for high quantum efficiency. It would further be obvious to cool the CCD detector. Cooling of CCD-type detectors is well known in the art.

As to claim 14, Cole in view of Hodgkinson does not disclose that the apparatus comprises a computer. Adachi teaches the use of a computer (paragraph [0064]) connected to the system. It would have been obvious at the time of invention to one of

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ordinary skill in the art to use a computer in the apparatus of Cole in view of Hodgkinson for purposes of display and further processing.

Claims 19 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cole in view of Hodgkinson and Kaufman as applied to claim 1 above, and further in view of Gillispie.

With respect to claim 19, Cole in view of Hodgkinson and Kaufman does not explicitly disclose the use of a pulsed light source. Gillispie teaches the use of a fluorescence detection system with a pulsed light source (fig. 1, element 102). It would have been obvious at the time of invention to one of ordinary skill in the art to use the pulsed light source of Gillispie in the apparatus of Cole in view of Hodgkinson and Kaufman. Pulsed light sources are known to achieve higher peak powers.

Claim 42 discloses the limitation of claims 1, 16, and 19 and is rejected accordingly.

#### **Allowable Subject Matter**

Claims 28,31-35 and 38 are allowed.

Claims 7, 20, 23, 43, and 45 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: With reference to claims 7, 28, and 32, the prior art did not teach or suggest the

use of a F/2 lens with a diameter over approximately 1.0m. As to claims 20, 38, and 43 the prior art did not teach or suggest the use of a controller that monitors the excitation light source for spectrum stabilization. As to claims 23 and 45, the prior art did not teach or suggest the use of a reflective spherical surface as a light-minimizing enclosure in a similar apparatus.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher G. Webb whose telephone number is (571) 272-8449. The examiner can normally be reached on 9AM - 5:30PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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